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MICHAEL ABRACZINSKAS
Director



NORTH CAROLINA
Environmental Quality

DRAFT

Mr. Terry Tuck
Dan River Combined Cycle Facility
Duke Energy Carolinas LLC
864 South Edgewood Road
Eden, NC 27288

SUBJECT: Air Quality Permit No. 03455T32
Facility ID: 7900015
Duke Energy Carolinas, LLC - Dan River Combined Cycle Facility
Eden, North Carolina
Rockingham County
Fee Class: Title V
PSD Class: Major

Dear Mr. Tuck:

In accordance with your completed Air Quality Permit Application for renewal of a Title V and Title IV permit, received May 29, 2020 and May 20, 2020 respectively, we forwarding herewith Air Quality Permit No. 03455T32 to Duke Energy Carolinas, LLC - Dan River Combined Cycle Facility, Eden, Rockingham County, North Carolina authorizing the construction and operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as "Attachment 2" to this cover letter. Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.



North Carolina Department of Environmental Quality | Division of Air Quality

217 West Jones Street | 1641 Mail Service Center | Raleigh, North Carolina 27699-1641

919.707.8400

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Rockingham County has triggered Pollutant Increment Tracking for PM10, SO2, and NOx. However, this permit modification does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from _____ until _____, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein. The changes made to the permit are summarized in Attachment 1 to this cover letter. Should you have any questions concerning this matter, please contact Edward L. Martin, P.E., at (919) 707-8739.

Sincerely yours,

William D. Willets, P.E., Chief, Permitting Section
Division of Air Quality, NCDEQ

Enclosure

cc: Kelly Fortin, EPA Region 4 (permit and review)
Connie Horne (cover page only)
Winston-Salem Regional Office
Central Files

Table of Changes

The following changes were made to the Duke Energy Carolinas, LLC - Dan River Combined Cycle Facility Air Permit No. 03455T31:

Page	Section	Description of Changes
Cover		Amended permit numbers and dates.
Insignificant Activities List		Added sources I-78 through I-83. Removed I-77 and I-ASH. Changed I-78 from 1100 gallon to 640 gallon.
TOC		Changed Acid Rain Permit Application date.
6	2.1.A.3.h	Revised reporting.
9	2.1.A.4.f	Revised monitoring for NOx.
10	2.1.A.4.i	Revised reporting.
18	2.2	Removed effective dates. The effective dates are the same as the Title V permit. Changed Acid Rain Permit Application date.
21-30	3	Updated General Conditions to version 5.5, 08/25/2020.

List of Insignificant Activities under 02Q .0503(8)

Emission Source I.D.	Emission Source Description
I-15	Above ground diesel storage tank and associated fueling station (500 gallons maximum storage capacity)
I-66 (NSPS, Subpart JJJJ, MACT, Subpart ZZZZ)	propane-fired standby emergency generator located at the microwave building (20 kilowatts / 33 horsepower maximum capacity)
I-67	GT8 and GT 9 main lube oil tanks (6,160 gallons maximum storage capacity, each)
I-68	STG7 main lube oil tank (4,800 gallons maximum storage capacity)
I-69	19.5% aqueous ammonia storage tank (20,000 gallons maximum storage capacity)
I-70	Oil/water separator system
I-71	Three GT and STG lube oil vapor extractors
I-72	Emergency diesel generator fuel tank (570 gallons maximum capacity)
I-73	Emergency diesel fire pump fuel tank (280 gallons maximum capacity)
I-74	Two closed loop cooling/chiller system cooling towers
I-75	Diesel fuel storage tank (1,000 gallons maximum storage capacity)
I-76	Kerosene storage tank (300 gallons maximum capacity)
I-SWP (NSPS, Subpart IIII, MACT, Subpart ZZZZ)	Five diesel-fired, emergency-use stormwater pumps (three rated at 74 horsepower, two rated at 24 horsepower)
I-78	One 250 kW (335 hp), No. 2 fuel oil-fired emergency engine to act as backup power for the landfill leachate tank system and an associated 640 gallon fuel tank
I-79	Two seven million Btu per hour Piedmont Natural Gas natural gas-fired heaters
I-80	Cold solvent parts washer (85 gallon maximum capacity)
I-81	Three 74 hp diesel-fired, emergency-use stormwater pumps
I-82	One 250 gallon propane tank for the microwave tower emergency engine
I-83	Heat Recovery Steam Generator exhaust stack drain pipe penetration seals' weep holes plugs removed for turbines ES-11 and ES-12

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 2D .1100 "Control of Toxic Air Pollutants" or 2Q .0711 "Emission Rates Requiring a Permit".

3. For additional information regarding the applicability of MACT/GACT see the DAQ page titled “The Regulatory Guide for Insignificant Activities/Permits Exempt Activities”. The link to this site is as follows: <http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide>.



State of North Carolina
Department of Environmental Quality
Division of Air Quality

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
03455T32	03455T31		

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes, Subchapters 02D and 02Q, and other applicable Laws. This permit contains all the terms, conditions and limitations applicable to this facility and is fully enforceable.

Pursuant to Title 15A NCAC Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete air quality permit application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee: **Duke Energy Carolinas, LLC –
Dan River Combined Cycle Facility**

Facility ID: **7900015**

Facility Site Location: **864 South Edgewood Road**
City, County, State, Zip: **Eden, Rockingham, NC 27288**

Mailing Address: **864 South Edgewood Road**
City, State, Zip: **Eden, NC 27288**

Application Numbers: **7900015.20A and 7900015.20B**
Complete Application Date: **May 20, 2020 and May 29, 2020**

Primary SIC Code: **4911**
Division of Air Quality, **Winston-Salem Regional Office**
Regional Office Address: **450 West Hanes Mill Road, Suite 300**
Winston-Salem, NC 27105

Permit issued this the ____ day of _____, 2020

William D. Willets, P.E., Chief, Air Permitting Section
By Authority of the Environmental Management Commission



State of North Carolina
Department of Environmental Quality
Division of Air Quality

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List of Acronyms

Acid Rain Permit Application dated May 19, 2020

SECTION 1- PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S)

The following table contains a summary of all permitted emission sources and associated air pollution control devices:

Pages	Emission Source I.D. No.	Emission Source Description	Control Device I.D. No.	Control Device Description
4-10, 18-20	ES-11 ES-12 (NSPS, Subpart KKKK)	two nominal 170 MW (GE Model 7FA) natural gas-fired combined-cycle combustion turbines (1,984.1 million Btu per hour nominal heat input each), each equipped with dry low-NOx combustors, a heat recovery steam generator (HRSG) with natural gas-fired duct burner (620 million Btu per hour nominal heat input, each), and a common steam turbine generator supplied by the two HRSGs	C11A ¹ C12A ¹ C11B C12B	selective catalytic reduction (SCR) CO/VOC oxidation catalyst
11	ES-13	one multi-cell cooling tower with drift eliminators (nominally 213,000 gallons per minute recirculating water flow rate)	NA	NA
12-14	ES-14 (NSPS, Subpart Dc)	one natural gas-fired auxiliary boiler (36.74 million Btu per hour heat input)	NA	NA
15-17	ES-15 (NSPS, Subpart IIII; Area Source MACT, Subpart ZZZZ)	one No. 2 fuel oil-fired emergency generator (1,490 horsepower) (2009-2010 model year)	NA	NA
15-17	ES-16 (NSPS, Subpart IIII; Area Source MACT, Subpart ZZZZ)	one No. 2 fuel oil-fired emergency firewater pump (237 horsepower) (2009-2010 model year)	NA	NA

¹ This control device to be operated only as needed to comply with 15A NCAC 2Q .0317 (i.e. PSD Avoidance).

SECTION 2- SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) listed below are subject to the following specific terms, conditions, and limitations, including the monitoring, recordkeeping, and reporting requirements specifically identified herein as applicable requirements:

- A. Two natural gas-fired combined-cycle combustion turbines (ID Nos. ES-11 and ES-12), each equipped with dry low-NO_x combustors, a heat recovery steam generator (HRSG) with a natural gas-fired duct burner, a common steam turbine generator supplied by the two HRSGs, associated selective catalytic reduction (SCR) (ID Nos. C11A and C12A), and associated CO/VOC oxidation catalyst (ID Nos. C11B and C12B)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	0.136 lb/mmBtu heat input (applies only to the duct burners)	15A NCAC 02D .0503
visible emissions	20 percent opacity	15A NCAC 02D .0521
nitrogen oxides	See Section 2.1.A.3.	15A NCAC 02D .0524 (40 CFR Part 60, Subpart KKKK)
	Phase II Acid Rain Permit Requirements See Section 2.2	15A NCAC 02Q .0402 (40 CFR Part 72)
	Cross State Air Pollution Rule (CSAPR) requirements. See Section 2.3.	40 CFR Part 97, Subparts AAAAA and BBBBB
sulfur dioxide	0.060 lb/million Btu heat input	15A NCAC 02D .0524 (40 CFR Part 60, Subpart KKKK)
	Phase II Acid Rain Permit Requirements See Section 2.2	15A NCAC 02Q .0402 (40 CFR Part 72)
	Cross State Air Pollution Rule (CSAPR) requirements. See Section 2.3.	40 CFR Part 97, Subpart CCCCC
carbon monoxide, VOC, nitrogen oxides, particulate matter, PM-10, sulfuric acid	See Section 2.1.A.4.	15A NCAC 02Q .0317 (PSD avoidance)

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of natural gas that are discharged from the duct

burners associated with these sources (**ID Nos. ES-11 and ES-12**) into the atmosphere shall not exceed 0.136 pounds per million Btu heat input when the duct burners are in service.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1.A.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for emissions of particulate matter from these sources (**ID Nos. ES-11 and ES-12**) to assure compliance with 15A NCAC 02D .0503.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. ES-11 and ES-12**) shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions approved as such according to procedures approved under 15A NCAC 02D .0535) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for opacity from the firing of natural gas in these sources (**ID Nos. ES-11 and ES-12**).

**3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS
(40 CFR Part 60, Subpart KKKK)**

- a. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" as promulgated in 40 CFR Part 60 Subpart KKKK, including Subpart A "General Provisions."

Emission Limitations [40 CFR 60.4320 and 4330]

- b. NO_x emissions (except during startup, shutdowns, and malfunction) from combustion turbines (ID Nos. ES-11 and ES-12) shall not exceed:
 - i. 15 ppm at 15 percent O₂, or
 - ii. 96 ppm at 15 percent O₂ when operating at less than 75 percent of peak load or operating at ambient temperature below 0 °F. [§60.4320]
- c. SO₂ emissions (except during startup, shutdowns, and malfunction) from the combustion turbines (ID Nos. ES-11 and ES-12) shall not exceed 0.06 lb/million Btu heat input. [§60.4330]

Testing [15A NCAC 02Q .0508(f)]

- d. The Permittee has completed initial testing for these sources (**ID Nos. ES-11 and ES-12**).² If

² Initial testing was completed between December 12 and 14, 2012.

additional emission testing is required, the testing shall be conducted in accordance with General Condition JJ. If the results of this testing indicates an exceedance of the emission limits in Paragraphs b. and c., above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- e. The Permittee shall operate and maintain the combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown and malfunction in accordance with §60.4333. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, specifically with requirements of 40 CFR 60.11(d), if the Permittee, to the extent practicable, does not maintain and operate combustion turbines including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions, at all times including periods of startup, shutdown, and malfunction.
- f. The Permittee shall install, calibrate, maintain and operate a NO_x continuous emissions monitoring system (CEMS) to demonstrate compliance with the applicable NO_x emission limit as described in §60.4340(b). Excess emissions are based on a 30-day rolling average, and shall be determined in accordance with §60.4345 and §60.4350. As provided in 40 CFR 60.4345(e), the Permittee may satisfy the quality assurance (QA) plan requirements by implementing the QA program specified in 40 CFR 75 Appendix B, Part 1. If the NO_x CEMS does not comply with the requirements of §60.4340(b) and §60.4345, or the NO_x emissions (except during startup, shutdowns, and malfunction) exceeds the applicable emission limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.
- g. The Permittee shall demonstrate compliance with the applicable SO₂ emission limit by making a demonstration that the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifies that the total sulfur content for natural gas is 20 grains of sulfur or less per 100 standard cubic feet, and has potential sulfur dioxide emissions of less than 0.060 lb SO₂/mmBtu in accordance with §60.4365(a). Alternatively, the Permittee may demonstrate compliance through representative fuel sampling data showing that the potential sulfur content of the fuel does not exceed 20 grains per 100 standard cubic feet. In this case, the Permittee shall provide at a minimum the amount of data in Section 2.3.1.4 or 2.3.2.4 of Appendix D of Part 75. The Permittee shall maintain records of the fuel contracts on site at the source for a period of two years. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the Permittee does not make the above demonstration, if the demonstration indicates that the sulfur content of natural gas exceeds 20 grains of sulfur per 100 standard cubic feet, if the SO₂ emissions (excluding the emissions during startup, shutdown, and malfunction) from the combustion turbines exceeds the applicable emission limit, or if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- h. The Permittee shall submit reports of excess emissions and monitor downtime postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. Excess emissions must be reported for all periods of operation, including startup, shutdown, and malfunctions. [§60.4375(a), §60.4380(c) and §60.4395]
Excess emissions and monitor downtime for NO_x are defined as follows:
 - i. Excess Emissions. To demonstrate compliance, an excess emission is any unit operating period in which the 30-day rolling average NO_x emission rate exceeds the applicable emission limit, as described in §60.4380(b).
 - ii. Monitor Downtime. To demonstrate compliance, a period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or

- invalid: NO_x, CO₂ or O₂ concentration.
- iii. For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard. [§60.4380(b)(3)]
 - i. The Permittee shall submit a summary report of monitoring and record keeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02Q .0317: AVOIDANCE CONDITION

(Avoidance of 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION)

- a. In order to avoid applicability of 15A NCAC 02D .0530(g), the following emission limits shall not be exceeded for the combustion turbines (ID Nos. ES-11 and ES-12):

POLLUTANT	EMISSION LIMITS (ES-11 and ES-12, combined)	CONTROL TECHNOLOGY
carbon monoxide (CO)	151.8 tons per 12-month rolling average	oxidation catalyst
volatile organic compounds (VOC)	45.2 tons per 12-month rolling average	oxidation catalyst
nitrogen oxides (NO _x)	781.2 tons per 12-month rolling average	selective catalytic reduction
particulate matter (including condensable particulate matter)	229.7 tons per 12-month rolling average	none
PM-10 (including condensable particulate matter)	197.5 tons per 12-month rolling average	sulfur content of natural gas shall not exceed 1.7 grains per 100 standard cubic feet
sulfuric acid	22.8 tons per 12-month rolling average	sulfur content of natural gas shall not exceed 1.7 grains per 100 standard cubic feet

Testing [15A NCAC 02Q .0508(f)]

- b. The Permittee has completed initial testing for these sources (**ID No. ES-11 and ES-12**).³ If additional emission testing is required, the testing shall be conducted in accordance with General Condition JJ. If the results of this emission testing indicate exceedances of the emission limits listed in Paragraph a., above, then the Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0317.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. For the calculations in Paragraphs d. through g., below:
 - i. emissions will be considered "uncontrolled" when the catalyst 4-hour rolling average inlet temperature is less than 580 °F, and

³ Initial testing for particulate and PM10 was conducted on April 29, 2014. Initial testing for VOC and CO were conducted between December 12 and 14, 2012.

- ii. "Operating time" includes periods of start-up, shutdown and malfunctions.
- d. In order to demonstrate compliance with the CO emission limit in Paragraph a., above, the Permittee shall continuously monitor and record the inlet temperature to the oxidation catalyst and calculate the monthly CO emissions from each source as follows:

$$\text{CO Emissions from ES-11 or ES-12 (pound/month)} = (\text{OT}_{c,db})(E_{c,db}) + (\text{OT}_{c,nb})(E_{c,nb}) + (\text{OT}_{nc,db})(E_{nc,db}) + (\text{OT}_{nc,nb})(E_{nc,nb})$$

where:

$\text{OT}_{c,db}$ = Operating time (hour/month) when the duct burners are operating and the catalyst meets the requirements of Paragraph c., above.

$E_{c,db}$ = CO emission factor when the duct burners are operating and the catalyst meets the requirements of Paragraph c., above.. (i.e. 14.6 pound/hour)

$\text{OT}_{c,nb}$ = Operating time (hour/month) the duct burners not are operating and the catalyst meets the requirements of Paragraph c., above.

$E_{c,nb}$ = CO emission factor when the duct burners are not operating and the catalyst meets the requirements of Paragraph c., above. (i.e. 8.9 pound/hour)

$\text{OT}_{nc,db}$ = Operating time (hour/month) when the duct burners are operating and the catalyst does not meet the requirements of Paragraph c., above.

$E_{nc,db}$ = CO emission factor when the duct burners are operating and the catalyst does not meet the requirements of Paragraph c., above. (i.e. 88.96 pound/hour)

$\text{OT}_{nc,nb}$ = Operating time (hour/month) when the duct burners are not operating and the catalyst does not meet the requirements of Paragraph c., above.

$E_{nc,nb}$ = CO emission factor when the duct burners are not operating and the catalyst does not meet the requirements of Paragraph c., above. (i.e. 33.16 pound/hour)

$$\text{Total monthly CO emissions} = \text{CO emissions from ES-11} + \text{CO emissions from ES-12}$$

- e. In order to demonstrate compliance with the VOC emission limit in Paragraph a., above, the Permittee shall continuously monitor and record the inlet temperature to the oxidation catalyst and calculate the monthly VOC emissions from each source as follows:

$$\text{VOC emissions from ES-11 or ES-12 (pound/month)} = (\text{OT}_{c,db})(E_{c,db}) + (\text{OT}_{c,nb})(E_{c,nb}) + (\text{OT}_{nc,db})(E_{nc,db}) + (\text{OT}_{nc,nb})(E_{nc,nb})$$

where:

$\text{OT}_{c,db}$ = Operating time (hour/month) when the duct burners are operating and the catalyst meets the requirements of Paragraph c., above.

$E_{c,db}$ = VOC emission factor when the duct burners are operating and the catalyst meets the requirements of Paragraph c., above.. (i.e. 5.0 pound/hour)

$\text{OT}_{c,nb}$ = Operating time (hour/month) the duct burners not are operating and the catalyst meets the requirements of Paragraph c., above.

- $E_{c,ndb}$ = VOC emission factor when the duct burners are not operating and the catalyst meets the requirements of Paragraph c., above. (i.e. 3.2 pound/hour)
- $OT_{nc,db}$ = Operating time (hour/month) when the duct burners are operating and the catalyst does not meet the requirements of Paragraph c., above.
- $E_{nc,db}$ = VOC emission factor when the duct burners are operating and the catalyst does not meet the requirements of Paragraph c., above. (i.e. 13.11 pound/hour)
- $OT_{nc,nd}$ = Operating time (hour/month) when the duct burners are not operating and the catalyst does not meet the requirements of Paragraph c., above.
- $E_{nc,nd}$ = VOC emission factor when the duct burners are not operating and the catalyst does not meet the requirements of Paragraph c., above. (i.e. 3.2 pound/hour)
- f. The Permittee shall record and maintain records of the monthly nitrogen oxides emissions from these sources (ID Nos. ES-11 and ES-12) in a logbook (written or in electronic format) as follows:
- Emissions of nitrogen oxides shall be determined using a continuous emissions monitoring system (CEMS) meeting the requirements of 15A NCAC 02D .0613 "Quality Assurance Program" and 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures." If the Permittee has installed a NOx CEMS to meet the requirements of 40 CFR Part 75 and is continuing to meet the ongoing requirements of 40 CFR Part 75, that CEMS may be used to meet the requirements of this section.
 - NOx CEMS data reported to meet the requirements of this section shall include data substituted using the missing data procedures in Subpart D of 40 CFR Part 75 except that unbiased values may be used. The missing data procedure shall be used whenever the emission unit combusts any fuel.
 - Excess emissions shall be defined as any consecutive 12-month period that exceeds the annual NOx limit in Section 2.1.A.4.a above.
 - Monitor downtime shall
 - not exceed 5.0 percent of the operating time in a calendar quarter, and
 - be calculated using the following equation:

$$\%MD = \left(\frac{\text{Total Monitor Downtime}}{\text{Total Source Operating Time}} \right) \times 100$$

Where:

"Total Monitor Downtime" is the number of hours in a calendar quarter where an emission source was operating but data from the associated CEMS are invalid, not available, or filled with the missing data procedure.

"Total Source Operating Time" is the number of hours in a calendar quarter where the emission source associated with the CEMS was operating.

- The Permittee shall submit reports of excess emissions and monitor downtime postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between

April and June, and October 30 of each calendar year for the preceding three-month period between July and September. Excess emissions must be reported for all periods of operation, including startup, shutdown, and malfunctions.

- g. In order to demonstrate compliance with the PM-10 emission limit in Paragraph a., above, the Permittee shall calculate the monthly PM-10 emissions from each source as follows:

$$\text{PM10 emissions from ES-11 or ES-12 (pound/month)} = (\text{OT}_{\text{db}})(\text{E}_{\text{db}}) + (\text{OT}_{\text{ndb}})(\text{E}_{\text{ndb}})$$

where:

OT_{db} = Operating time (hour/month) when the duct burners are operating.

E_{db} = PM10 emission factor when the duct burners are operating. (i.e. 16.97 pound/hour)

OT_{ndb} = Operating time (hour/month) the duct burners not are operating.

E_{ndb} = PM10 emission factor when the duct burners are not operating. (i.e. 11.53 pound/hour)

$$\text{Total monthly PM-10 emissions} = \text{PM-10 emissions CT ES-11} + \text{PM-10 emissions CT ES-12}$$

If the records of calculations required by Paragraphs d. through g., above, are not performed and maintained and/or if the calculations indicate an exceedance of the corresponding emission limit in Paragraph a., above, the Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0317.

- h. The sulfur content of the natural gas combusted in the turbines shall not exceed 1.7 grains per 100 standard cubic feet. If the sulfur content of the natural gas burned in the turbines exceeds this limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0317.

Reporting [15A NCAC 02Q .0508(f)]

- i. The Permittee shall submit a semiannual summary report of emissions of the pollutants listed in Section 2.1.A.4.a above from each source (ID Nos. ES-11 and ES-12) postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. At a minimum, the report shall include:
- The total emissions (as tons per consecutive 12-month period) for all sources based on the recordkeeping in Sections 2.1.A.4.d through g above. The emissions must be calculated for each of the 12-month periods over the previous 17 months.
 - Records of excess emissions and monitor downtime for the associated CEMS in the format approved by DAQ Technical Services Section for the turbines (ID Nos. ES-11 and ES-12). The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction.

All instances of deviations from the requirements of this permit must be clearly identified.

B. One multi-cell cooling tower (ID No. ES-13)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	For $P \leq 30$, $E = 4.10 \times P^{0.67}$ For $P > 30$, $E = 55.0 \times P^{0.11} - 40$ where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from this source (**ID No. ES-13**) shall not exceed an allowable emission rate as calculated by the following equation:

$$\text{For } P \leq 30, E = 4.10 \times P^{0.67}$$

$$\text{For } P > 30, E = 55.0 \times P^{0.11} - 40$$

Where:

E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in 2.1.B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for particulate matter emissions from this source (**ID No. ES-13**).

C. One natural gas-fired auxiliary boiler (ID No. ES-14)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	0.136 pound per million Btu heat input	15A NCAC 02D .0503
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
visible emissions	20 percent opacity	15A NCAC 02D .0521
NA	recordkeeping	15A NCAC 02D .0524 (40 CFR 60 Subpart Dc)
particulate matter sulfur dioxide	2000 hours per year maximum operation and natural gas sulfur content of 2.0 grains of per 100 standard cubic feet (0.006 lb/mmBtu)	15A NCAC 02Q .0317 (15A NCAC 02D .0501(c) avoidance)

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of natural gas that are discharged from this source (**ID No. ES-14**) into the atmosphere shall not exceed 0.136 pounds per million Btu heat input.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.C.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in this source (**ID No. ES-14**).

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source (**ID No. ES-14**) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.C.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from natural gas for this source (**ID No. ES-14**).

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source (**ID No. ES-14**) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions approved as such according to procedures approved

under 15A NCAC 02D .0535) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.C.3.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for visible emissions from this source (**ID No. ES-14**).

4. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

(40 CFR Part 60, Subpart Dc)

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f), 40 CFR 60.48c(g)]

- a. The Permittee shall record and maintain records of the amount of fuel burned in this source (**ID No. ES-14**) during each calendar month. Such records shall be maintained on site at the source for a period of two years following the date of such record. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- b. The Permittee shall submit a semi-annual summary report of the monitoring and recordkeeping activities, acceptable to the Regional Air Quality Supervisor, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June.

5. 15A NCAC 02Q .0317: AVOIDANCE CONDITION

(Avoidance of 15A NCAC 02D .0501(c): COMPLIANCE WITH EMISSION CONTROL STANDARDS)

- a. In addition to any control or manner of operation necessary to meet emission standards in 15A NCAC 02D .0500, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards of 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in 15A NCAC 02D .0500 are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.
- b.
 - i. The maximum sulfur content of the natural gas burned in the boiler (**ID No. ES-14**) shall not exceed 2.0 grains of sulfur per 100 standard cubic feet.
 - ii. The maximum annual hours of operation for the boiler (**ID No. ES-14**) shall not exceed 2,000 hours per rolling consecutive 12-month period.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c) if the sulfur content of the natural gas or hours of operation exceed these limits.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. The Permittee shall record monthly and total annually the hours of operation of the boiler (**ID No. ES-14**).
- d. The Permittee shall demonstrate compliance with the sulfur content limit by:
 - i. A current, valid purchase contract, tariff sheet or transportation contract for the fuel, that specifies the total sulfur content for natural gas is less than the allowable limit (the Permittee shall maintain records of the fuel contracts on site at the source for a period of two years); or

- ii. The Permittee may demonstrate compliance through representative fuel sampling data showing that the potential sulfur content of the fuel does not exceed the allowable limit. In this case, the Permittee shall provide at a minimum the amount of data in Section 2.3.1.4 or 2.3.2.4 of Appendix D of Part 75.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c) if the Permittee does not make the above demonstration or if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a semi-annual summary report of the monitoring and recordkeeping activities, acceptable to the Regional Air Quality Supervisor, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June.

D. Stationary internal combustion engines, including:

- one No. 2 fuel oil-fired emergency generator (ID No. ES-15)
- one No. 2 fuel oil-fired emergency firewater pump (ID No. ES-16)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
visible emissions	20 percent opacity	15A NCAC 02D .0521
nitrogen oxides, VOC, carbon monoxide, particulates	See Section 2.1.D.3.	15A NCAC 02D .0524 (40 CFR Part 60, Subpart IIII)
HAP	comply with the requirements of 40 CFR Part 60 Subpart IIII	15A NCAC 02D .1111 (40 CFR Part 63, Subpart ZZZZ)

1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from these sources (ID No. ES-15 and ES-16) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.D.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in these sources (**ID No. ES-15 and ES-16**).

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (ID No. ES-15 and ES-16) shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions approved as such according to procedures approved under 15A NCAC 02D .0535) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.D.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of No. 2 fuel oil in these sources.

3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS
(40 CFR Part 60, Subpart IIII)

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0524, "New Source Performance Standards" as promulgated in 40 CFR Part 60, Subpart IIII, including Subpart A "General Provisions".
- b. The following emission limits shall not be exceeded: [40 CFR 60.4202(a) and 60.4205(c)]:

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT (g/hp-hr)
emergency generator (ID No. ES-15)	nitrogen oxides + VOCs	4.8
	carbon monoxide	2.6
	PM	0.15
emergency firewater pump (ID No. ES-16)	nitrogen oxides + VOCs	7.8
	carbon monoxide	2.6
	PM	0.40

Testing [15A NCAC 02Q .0508(f)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1.D.3.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Compliance Requirements [40 CFR 60.4206 and .4211]

- d. Pursuant to 40 CFR 60.4206 and 40 CFR 60.4211(a), the Permittee shall operate and maintain the emergency generators in accordance with the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. The Permittee may only change engine settings that are permitted by the manufacturer. The Permittee shall also meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable.
- e. Pursuant to 40 CFR 60.4211(c), the Permittee shall purchase the emergency generators certified to the emission standards in 40 CFR 60.4205(b). The generators shall be installed and configured according to the manufacturer's specifications.
- f. Pursuant to 40 CFR 60.4211(e), the Permittee may operate the emergency generator for maintenance checks and readiness testing for up to 100 hours per year provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Operation during an actual emergency shall not be subject to a limit on hours. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Because the Permittee is required to comply with emission standards under 40 CFR 60.4205 for the emergency generators and not under 40CFR 60.4204, any operation other than emergency operation, and maintenance and testing as allowed in 40 CFR 60.4211 is prohibited.
- g. The Permittee shall only use diesel fuel with sulfur content of less than 15 ppm. [40 CFR 60.4207, 80.510(b)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the requirements in conditions e. through g. are not met.

Monitoring [40 CFR 60.4209(a)]

- h. The emergency generator shall be equipped with a non-resettable hour meter prior to startup.

Recordkeeping [15A NCAC 02Q .0508(f)]

- i. To assure compliance, the Permittee shall perform inspections and maintenance on the emergency generators as recommended by the manufacturer per 40 CFR 60.4206 and 40 CFR 60.4211(a). The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the emergency generator;
 - iv. any variance from manufacturer's recommendations, if any, and corrections made; and
 - v. the hours of operation of the emergency generator.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- j. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit shall be clearly identified.

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

(40 CFR Part 63, Subpart ZZZZ)

- a. For these sources (**ID Nos ES-15 and ES-16**), the Permittee shall comply with the requirements of 40 CFR Part 63, Subpart ZZZZ by meeting the requirements of 40 CFR Part 60, Subpart IIII as specified in Section 2.1.D.3 above. No further requirements apply under 40 CFR Part 63, Subpart ZZZZ. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the Permittee does not comply with the requirements of 40 CFR Part 60, Subpart IIII as specified in Section 2.1.D.3.

2.2- Phase II Acid Rain Permit Requirements

ORIS code: 2723

A. Statement of Basis

Statutory and Regulatory Authorities: In accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended and Titles IV and V of the Clean Air Act, the Department of Environment and Natural Resources, Division of Air Quality issues this permit pursuant to Title 15A North Carolina Administrative Codes, Subchapter 02Q .0400 and 02Q .0500, and other applicable Laws.

B. SO₂ Allowance Allocations and NO_x Requirements for each affected unit

ES-11	SO ₂ allowances	SO ₂ allowances are not allocated by U.S. EPA for new units under 40 CFR Part 72.
ES-12	NO _x limit	Does not apply for gas or oil-fired units.

C. Comments, Notes and Justifications

None.

D. Phase II Permit Application (attached)

The permit applications submitted for this facility, as approved by the Division of Air Quality, are part of this permit. The owners and operators of these Phase II acid rain sources must comply with the standard requirements and special provisions set forth in the following attached application:

Acid Rain Permit Application dated May 19, 2020.

Federal-Enforceable Only

2.3- Cross State Air Pollution Rules (CSAPR) Permit Requirements

For the two combustion turbines (ID Nos. ES-11 and ES-12), the Permittee shall comply with all applicable requirements of 40 CFR Part 97, Subpart AAAAAA "TR NO_x Annual Trading Program", Subpart BBBBBB "TR NO_x Ozone Season Trading Program", and Subpart CCCCCC "TR SO₂ Group 1 Trading Program".

2.4- Permit Shield for Non-applicable Requirements

The Permittee is shielded from the following non-applicable requirements:

1. The EPA's Clean Air Interstate Rules (CAIR) are not applicable to the combustion turbines (**ID Nos. ES-11 and ES-12**), pursuant to 40 CFR 52.35(f) and 52.36(e). CAIR has been replaced by the Cross State Air Pollution Rule (CSAPR).
2. The requirements of 15A NCAC 02D .2400 "Clean Air Interstate Rules" no longer apply to the combustion turbines (**ID Nos. ES-11 and ES-12**). According to 15A NCAC 02D .2401(a), the purpose of the 02D .2400 rules is to implement CAIR. Because CAIR no longer applies, the 02D .2400 rules also no longer apply.

[15A NCAC 02Q .0512(a)(1)(B)]

SECTION 3 - GENERAL CONDITIONS (version 5.5, 08/25/2020)

This section describes terms and conditions applicable to this Title V facility.

A. General Provisions [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]

1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. Permit Availability [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]

The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. Severability Clause [15A NCAC 02Q .0508(i)(2)]

In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. Submissions [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 02Q .0514]

The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.

2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]

The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.

3. Minor Permit Modifications [15A NCAC 02Q .0515]

The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.

4. Significant Permit Modifications [15A NCAC 02Q .0516]

The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.

5. Reopening for Cause [15A NCAC 02Q .0517]

The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements

Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:

- a. changes in the information submitted in the application;
- b. changes that modify equipment or processes; or
- c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]

- a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
- b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:

- i. the changes are not a modification under Title I of the Federal Clean Air Act;
 - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
 - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
 - iv. the Permittee shall attach the notice to the relevant permit.
 - c. The written notification shall include:
 - i. a description of the change;
 - ii. the date on which the change will occur;
 - iii. any change in emissions; and
 - iv. any permit term or condition that is no longer applicable as a result of the change.
 - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 02Q .0523(b)]
- The Permittee may make changes in the operation or emissions without revising the permit if:
- a. the change affects only insignificant activities and the activities remain insignificant after the change; or
 - b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]
- To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

I.A Reporting Requirements for Excess Emissions and Permit Deviations [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

“Excess Emissions” - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. (*Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.*)

“Deviations” - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

- 1. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
- 2. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
 - a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
 - i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
 - name and location of the facility;
 - nature and cause of the malfunction or breakdown;
 - time when the malfunction or breakdown is first observed;
 - expected duration; and
 - estimated rate of emissions;
 - ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and

- iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
 - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B Other Requirements under 15A NCAC 02D .0535

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).
2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. Emergency Provisions [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
 - a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
 - b. the permitted facility was at the time being properly operated;
 - c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
 - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. Permit Renewal [15A NCAC 02Q .0508(e) and 02Q .0513(b)]

This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least six months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC

02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 02Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. **Duty to Provide Information (submittal of information)** [15A NCAC 02Q .0508(i)(9)]

1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and

belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. Permit Shield for Applicable Requirements [15A NCAC 02Q .0512]

1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
 - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
 - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
 - c. the applicable requirements under Title IV; or
 - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. Termination, Modification, and Revocation of the Permit [15A NCAC 02Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. Insignificant Activities [15A NCAC 02Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. Property Rights [15A NCAC 02Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. Inspection and Entry [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]

1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
 - a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
 - b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
 - c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.

2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 02Q .0508(i)(10)]

1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 02Q .0107 and 02Q .0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 02Q .0100 and .0300]

A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History** [15A NCAC 02Q .0507(d)(3)]

The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(d)]

1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. Prevention of Accidental Releases - Section 112(r) [15A NCAC 02Q .0508(h)]

If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) – FEDERALLY-ENFORCEABLE ONLY

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. Title IV Allowances [15A NCAC 02Q .0508(i)(1)]

This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. Air Pollution Emergency Episode [15A NCAC 02D .0300]

Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.

HH. Registration of Air Pollution Sources [15A NCAC 02D .0202]

The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).

II. Ambient Air Quality Standards [15A NCAC 02D .0501(c)]

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. General Emissions Testing and Reporting Requirements [15A NCAC 02Q .0508(i)(16)]

Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .1110, or .1111 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance for emission sources subject to Rules .0524, .1110, or .1111, the Permittee shall provide and submit all notifications, conduct all testing, and submit all test reports in accordance with the requirements of 15A NCAC 02D .0524, .1110, or .1111, as applicable. Otherwise, if emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.

2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
 - a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
 - i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
 - ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
 - iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
 - b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

KK. Reopening for Cause [15A NCAC 02Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
 - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
 - b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
 - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
 - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall

send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. Reporting Requirements for Non-Operating Equipment [15A NCAC 02Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes.

MM. Fugitive Dust Control Requirement [15A NCAC 02D .0540]

As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas, stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. Specific Permit Modifications [15A NCAC 02Q .0501 and .0523]

1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
 - a. a description of the change at the facility;
 - b. the date on which the change will occur;
 - c. any change in emissions; and
 - d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. Third Party Participation and EPA Review [15A NCAC 02Q .0521, .0522 and .0525(7)]

For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

List of Acronyms

AOS	Alternative Operating Scenario
BACT	Best Available Control Technology
BAE	Baseline Actual Emissions
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
CSAPR	Cross-State Air Pollution Rule
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
GHGs	Greenhouse Gases
HAP	Hazardous Air Pollutant
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NAAQS	National Ambient Air Quality Standards
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standard
NSR	New Source Review
OAH	Office of Administrative Hearings
PAE	Projected Actual Emissions
PAL	Plantwide Applicability Limitation
PM	Particulate Matter
PM_{2.5}	Particulate Matter with Nominal Aerodynamic Diameter of 2.5 Micrometers or Less
PM₁₀	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO₂	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	Tons Per Year
VOC	Volatile Organic Compound

Attachment 2 to Permit 03455T32

Duke Energy Carolinas, LLC - Dan River Combined Cycle Facility

Acid Rain Permit Application

(dated May 19, 2020)

(four pages)